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PSEUDO-LEUKAEMIA.

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Read Before the Kansas Medical Society at Iola, May 6, 1908.

I shall endeavor to present for consideration the history of a case of Hodgkin's disease as I have seen it; and a review of what literature I have been able to acquire. The history is about as follows:

H. L. S., 64 yrs, was examined at my office on July 18th, 1907, after having gone the rounds of various advertising medicine men. His family history is negative. The patient stated that he had always been in good health up to two years ago. He first noticed a swelling on the left side of his neck about the angle of the jaw. This steadily grew in size until at six months, it was half the size of a man's fist. There was no pain at first, but after three months shooting pains were experienced. After six months he noticed nodules above the collar bone on the left side, and a considerable nodule below his right ear. His left tonsil became so much enlarged as to render deglutition difficult.

An examination at the time he came to me showed a general appearance of decline. His neck on both sides were swollen even from chin to sternum and perfectly round as though no neck of regular symetry existed. The left tonsil was broken down and sloughing out. Paralysis of the left side of the palate existed to such a degree that food and drink regurgitated through the nostrils. The axillary glands were markedly enlarged. The inguinal glands only slightly enlarged. The spleen was enlarged to quite a degree, and the liver seemed slightly enlarged. Examination of all other viscera was negative. Blood examination in September 1907 showed red cells 5,400,000, leucocytes 51,000, haemoglobin 80 per cent. I made a diagnosis of Hodgkin's Disease in this case,

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basing it upon symptoms, duration of time of existence, and the character of the blood findings.

Pseudo-leukaemia is a chronic anaemia leading to cachexia, in which aside from relatively insignificant changes in the blood, nothing abnormal is found excepting a swelling in the lymphatic glands of the spleen, or both. The changes in the blood affect only the red corpuscles and their haemoglobin, and produce a number of symptoms dependent upon these lesions, particularly manifestations of hemorrhagic diathesis.

Pseudo-leukaemia admits of the same differentiation as leukaemia, depending upon the blood forming organs involved; we have therefore a spenic, a myologenous, and a lymphatic form. Mixed forms between splenic and lymphatic varieties are especially frequent.

The disease has been given a number of names, which in itself shows how very obscure were, and still are, our ideas in regard to its nature. Thus it has been called adenie of Tousseau, Hodgkin's disease, anaemia splenica seu lymphatica, malignant lymphosarcoma by Langhans, malignant lymphoma of Billroth, etc.

On postmortem examination a wide spread cellular hyperplasia of the lymph glands and lymphatic follicles is found usually combined with an enlargement of the spleen, numerous lymphoid nodules in the interstitial tissue of the liver, spleen, kidneys and other organs; all changes corresponding to those of leukaemia.

ETIOLOGY,—The causes of this disease are unknown. We must consider different kinds of irritation exercising their effect for a long time in the region of the diseased glands, trauma affecting the spleen, attacks of intermittant fever, and possibly the existence of syphilis. Scrofulosis must be strictly excluded. Colonies of bacterium coli have been repeatedly found in pseudo-leukaemic spleen, but this find has little significance. Men are more frequently affected than women; the disease is found not infrequently in children.

The best pathological view of Hodgkin's Disease is perhaps that described by Dorothy Reed. Although the paper contains a very careful review of the literature on the subject, its chief value lies in the fact that it represents the most careful and painstaking study of eight cases of Hodgkin's disease observed at the Johns Hopkins Hospital that has yet been written. The main points of the pathological significance are described, as enlargement of lymphatic glands, absence of infiltration of the capsule, greyish surface broken by intersecting yellow lines; metastasis in the viscera

presenting a similar appearance though of irregular outline and apparently invading the organ in different directions. On section they present the same appearence as described in the glands. On microscopical examination there is found dilitation of the blood vessels and lymph sinuses, marked increase of lymphocytes and proliferating endothelial cells, numerous giant cells with one or more neuclei and prominent neucleoli in a great number. Occasionally a large giant cell with many small neucleoli peripherally arranged is seen. An increased number of eosinophiles is generally observed. Reed states that the capsule of the gland usually shows no change except possibly some thickening. This is not however, borne out by other authors, especially by Gibbons in his recent work.

The large giant cells are the most striking feature of the sections of Hodgkin's disease tumors. Reed states that they occur in large numbers in the larger lymph sinuses of the glands and are occasionly seen in the blood vessels. They vary remarkably in size from two or three to twenty times the size of a red corpuscle. Sometimes as many as eight or ten neuclei are seen in one cell.

The clinical picture of Hodgkin's disease is always characteristic. It nearly always begins with swelling in the cervical glands and may occur at any period of life, but most common in early years and in the male rather than in the female. The glands begin to enlarge on one side first; very quickly enlargement comes on the other side and a little later in the axillary region and last in the inguinal region, and in the internal viscera.

Although for the past twenty years numerous authors have attempted to maintain the tubercular origin of Hodgkin's disease, the most elaborate paper holding this view being that of Sternbergs, this theory has been so thoroughly controverted by many recent writers, particularly by Reed, that it can claim no further consideration. As in favor of the infection theory she sights the following facts: first, fever is frequently associated with the disease, to which Coley says that this is characteristic of sarcoma. Second, that the frequency with which it starts in the cervical region suggests infection through the mucous membrane of the mouth and throat, again Coley says that this would apply equally well to sarcoma of the neck. Reed states that the growths differ from sarcoma by absence of capsular infiltration and implication of adjacent tissue, and states that sarcoma does not confine itself by gradual extension from gland to gland.

Still another objection to the malignant theory, and one most frequently advanced is that metastasis occurs only in pre-existing

lymphoid tissue. Banti and Gibbons have both shown that metastasis occurs in Hodgkin's disease where there is absolutely no lymphoid tissue present. Five cases in which they had made autopsies showed metastasis over the entire body with metastasis in the liver, spleen, kidneys, lungs, pericardium and pancreas. In two they found metastasis in the structures of the neck, the fascia, muscles, and the cervical vertebra. The walls of the jugular veins were invaded.

In regard to blood examinations in the diagnosis of Hodgkin's disease, opinions vary. Reed and most writers believe that it offers nothing characteristic, although oftimes there is an increase in the eosinophiles. Cabot in a series of thirty-two cases found a distinct lymphocytosis in eleven, DaCosta found three in ten, Langcope found one in eight, while Pincus of Berlin regards it as present in the majority of all cases. Coley also states that he found it present in several of his cases.

The number of red corpuscles is diminished, the haemoglobin diminished considerably more than would correspond to the decrease in the number of erythrocytes. A rapid reduction of haemoglobin is occasionly seen. The number of eosinophiles is not increased, nor are the cells containing red corpuscles present in great numbers in the blood; in the spleen however they are found in large quantities. The blood plaques according to many writers are almost constantly increased. In contra distinction Charcots crystals are never found in the blood of Hodgkin's disease.

Within recent years different authors have described cases of pseudo-leukaemia with attacks of recurrent fever and have called these conditions infectious pseudo-leukaemia or chronic recurrent fever. During the course of the fever the spleen increases in size, and decreases again during the period of apyrexia. Occasionly the glands situated near the surface of the body may become enlarged, chiefly the bronchial, retroperitoneal and mesenteric.

Canstatt, Sharlau, and Fuhrer,among the older authors, have described an enlargement of the spleen in chlorosis. They describe the spleen as very much enlarged, pale red, very juicy on transverse section, containing a parenchyma fragile and glandular. Chvostek found enlargement of the spleen in twenty-one of fifty-six cases of chlorosis which he observed in the medical wards of Vienna. In one series of cases a uniform reduction in the size of the tumor could be observed running parallel with the sessation of other symptoms of the disease and the amelioration of the condition of blood. If every other etiological factor that could produce an enlargement of the spleen could be ruled out, then

possibly we are justified in recognizing and assuming such a connection; in this case such a tumor would not be an accidental finding but be in relation to the general disease. Such cases of chlorosis with palpable tumors of the spleen, either hard or soft, form a transition to the case of splenic pseudo-leukaemia.

The prognosis is not influenced by the presence of a splenic tumor. In making a diagnosis of Hodgkin's disease we must always consider that in adults, and still more frequently in children, chronic tumors of the spleen and lymphatics may be found even in the absence of any recognizable etiological factor. As accordingly in children considerable pallor is observed, and at the same time no positive decision can be arrived at from blood examinations, it is frequently difficult to differentiate pseudo-leukaemia from a simple anaemia with glandular swelling. It is well to remember that pseudo-leukaemia is a disease of progressive character. This is manifested very clearly in the manner in which the lymph glands become involved. If these organs have become swollen they rarely recede; on the contrary they continue to enlarge which at the same time neighboring glands, or glands that are situated at a distance begin to participate in the disease process. They never show a tendency to amalgamate, to suppurate or to undergo caseous degeneration. They seem to remain isolated and can be palpated in all their dimensions. The skin over the glands remains intact and does not become adherent, and abcess formation does not occur. If all these factors are observed the lymphatic form of pseudo-leukaemia can usually be diagnosed.

It is hardly possible to confound lymphatic pseudo-leukaemia with other diseases. In the tuberculous form enlarged lymphatic glands are usually multiple and show a tendency to suppuration and caseous degeneration. The same may be said of scrofulous glands found in the region of the neck. In very difficult and important. cases, glands have been extirpated for the purpose of diagnosis, and microscopic examination has usually revealed the true condition. If suppuration, cheesy degeneration, and calcification are found in the centre of the gland they should be taken as evidence of tuberculosis and scrofula. Cellular hyperplasia on the other hand, with or without thickening of the reticulum, speaks in favor of pseudo-leukaemia.

Nothnagle sights the following case to prove the difficulty in differential diagnosis between Hodgkin's disease and lymphosarcoma. "A boy of fifteen, otherwise healthy, developed a tumor in the left upper region of the neck, that was found upon extirpation to be a lymphoma. The patient recovered very well from the

operation. Half a year later pain increasing in intensity was omplained of in the left abdominal region; the general health atc the same time remaining unimpaired. The splcen gradually enlarged and ultimately formed a tumor of considerable size below the left costal arch: it was very freely movable and could be clearly diagnosed as a spleen from its position, outline and consistance. Laparotomy was performed and a tumor weighing two K. G. was removed. On extirpation it was found that this tumor had its origin in the spleen and contained a neoplasm that was a sarcoma or lymphosarcoma. Numerous glandular metastases was found in the hilum. Changes in the blood were not present before the operation nor were they found afterwards."

The prognosis of the disease is always bad. It is but little influenced by treatment. The length of time for the patient varies from six months to two and one half years.

The treatment is largely that followed in lymphatic leukaemia. Arsenic is the most recommended of all drugs. The drug may be administered internally or subcutaneously, or injected directly into the parenchyma of the gland. The action of the drug in external use is dynamic,and if much of it is employed, inflammatory and irritating. The fact that pathological cells can resist the irritating action of arsenic less than normal cells is of fundamental importance for therapy. We can conclude from this observation that even the internal administration of arsenic, owing to its dinamic action, will not interfer with normal cells but will seriously affect the abnormal ones and gradually lead to their destruction. Therefore the internal administration of arsenic should have some value.

Sometimes when arsenic has been used in the treatment of Hodgkin's disease the cachexia may increase, even though at the same time the general symptoms may ameliorate and the appetite improve. It is a very important fact that even the internal administration of Fowler's solution may produce inflammatory changes in the glandular swellings. Where the remedy is acting successfully the tumor increases in hardness and solidity in proportion to its diminution in size. Inflammation, suppuration and abscess formation may sometimes occur.

Parenchymatous injections of arsenic into the tissue of the spleen have been attempted. The results were occasionly good and the size of the organ seemed to decrease. Injections of quinine and carbolic acid have been tried with some success. Its a good plan to precede the injections by a course of treatment that renders the quantity of blood less in the glandular system by action upon

the contractile tissue. The best method of producing this result is by using ice bags over the region for several hours.

Swelling of the glands seemed to decrease by the internal use of phosphorus and antimony. The former remedy is best administered in the form of oil of phosphorus, but not in concentrated form. Neither phosphorus or antimony has been tested for as long a time as arsenic and it is necessary before adopting them to gain more experience in regard to their action. Wunderlich recommends iodide of potassium and for an after cure iron preparations and iron baths.

Recently Dr. Coley has used with some success the mixed toxin of streptococcus and bacillus prodigiosus. He begins with the injection of one fourth of one minim and increases to four minims, or until a reactory temperature of 102 to 104 is reached. The injections are made into the tumor masses themselves preferably, but when this is not practical, in the cellular tissue anywhere on the body. The injection is given each day if too much depression is not experienced, otherwise two or three days intervals are observed.

DISCUSSION.

DR. C. C. NESSELRODE, of Kansas City.—I was very much interested in the doctor's paper. He didn't state the date of this patients death.

DR. MANNING: He lived two and a half years from the date of the first examination, and died, I think it was in October a year ago.

DR. NESSELRODE—I was also very much surprised at the reported blood count, for although the man was then cachectic and died in less than two months there after we have reported a red count slightly above normal and haemoglobin 80%.

The white count of 51000 is certainly not a part of the picture of Hodgkins' disease, and if this was an accurate count we will have to look for something foreign to the disease to explain this leucocytosis. Perhaps it might be charged to the sloughing tonsil to which the author refers.

The usual blood picture of so advanced a case of Hodgkins is the picture of an advanced secondary anemia, perhaps two or three millions reds 30 to 40% haemoglobin and two to five thousand whites.

While this case from its clinical aspects would perhaps justify a diagnosis of Hodgkins yet the diagnosis of Hodgkin's disease is never a certainty until a section of the pathological tissue has been examined with the microscope; for while there is nothing essentially characteristic in either the clinical history or the blood findings of a case of Hodgkins yet it has as definite and characteristic a pathological histology as has a tubercular lesion or carcinoma.

And since no autopsy was done or no microscopical examination of the tissue made we are inclined to accept this as a probable diagnosis and not as a positive one.

DR. MANNING, (Closing the discussion)—I have not very much to say. My excuse for writing this paper was because of the rarity of the disease, being the second one I had ever seen. The first one was in St. Luke's Hospital, Chicago eight years ago, when I was an interne there, and I was interested at that time, and took occasion to look up the literature, and this came to me after it had gone around for some time, and had been diagnosed various ways, and I made a study of it for a good many months before I was satisfied as to what it was. One of the things that struck me in beginning to prepare this paper was the lack of definite know-

ledge that could be gained from all the articles on Hodgkin's disease. Every one that has written has written about the same thing with about the same kind of definition to it. Coley is a man that has written quite a little on Hodgkin's disease, and his trend is entirely toward that of lympho-sarcoma. He does not really consider it a disease differentiated in itself.

Concerning the criticism on my count of the leucocytes I want to state probably that was caused on account of the condition of the tonsil in this patient. It was sloughed out at the time I made the count, and probably the number could be accounted for in that way.

THE GASTRO-INTESTINAL NEUROSES.

By DR. W. R. HEYLMUN, Iola, Kansas.

Read Before the Kansas Medical Society, May 7, 1908.

Disorders depending on a disturbed or deranged condition of the nervous system, without an organic lesion, or in no wise dependent on an organic lesion, are among the most common of ailments, ranging all the way from transient emotional disturbances to the most profound invalidism.

In the more pronounced disorders coming under this head the symptoms are usually complex, and often extremely puzzling to the physician. The question as to whether or not he has to deal with a purely nervous affection is often most difficult to solve.

Between the mild disorders of the nervous system and the pronounced cases of neurasthenia there is a middle ground, made up largely of those neurotic persons who often go the rounds of the doctors, healers, spiritualists, etc. It is among this class that we find those sufferers from gastro-intestinal neuroses with whom this paper has to deal.

Among the multiplicity of subjective symptoms belonging to nervous disorders, a few are present in nearly every case, from the mildest to the most severe. These are: head-ache, insomnia, and some form of gastro-intestinal derangement. It would hardly do to say some form of gastric, or maybe, intestinal derangement, because the stomach and intestines are nearly always associated in the disturbance, although the patient may complain more of one organ than of the other. The head-ache, insomnia, and gastro-intestinal disturbance are often variously combined in the same individual.

The neuroses affecting the gastro-intestinal tract are commonly divided into three classes, viz: motor, sensory, and secretory.

The motor neuroses of the stomach are, 1st: regurgitation of food; 2d: a relaxed sphincter of the pyloris during the process of digestion, which permits food passing before it has been properly

acted upon by the digestive juices. This condition has been called by Boaz: "Incontinentia Pylori". 3d: nervous eructation, which is usually the explusion of air from the stomach, with a small admixture of gas. 4th: flatulent distention, in which the stomach is markedly distended with air. 5th: the peristaltic unrest of Kussnaul, in which abnormal peristaltic movements of the stomach and intestines occur almost continually, without reference to the ingestion of food. This movement is accompanied by uneasiness, often amounting to actual pain.

The sensory neuroses include, 1st: morbidly increased sensations of hunger, or, on the other hand, entire loss of appetite, accompanied by a loathing or disgust for all kinds of food. 2d: nausea, with or without vomiting,even when the digestive apparatus is not at fault. 3d: gastralgia, which may be severe and periodical and independent from ingestion of food. 4th: stomach burn, which has no connection with the ingestion of food, and differs essentially from heart-hurn.

The secretory neuroses of the stomach include those cases where no organic disease exists, and yet there is a marked deficiency in the gastric juices, the "Achylia Gastrica" of Einhorn. In other cases there is a hyperacidity, due to an excess of normal hydrochloric acid secretion.

In what is commonly known as nervous dyspepsia the symptoms of motor, sensory, and secretory derangements are usually variously combined, and produce a complex set of symptoms which are often most difficult to rightly interpret.

Nervous derangements of the intestines, like those of the stomach may be divided into motor, sensory, and secretory. The disorder affecting the stomach may extend to and affect the intestine in the same manner.

The motor neuroses of the intestines include, 1st: peristaltic unrest, which causes more or less uneasiness, often amounting to actual pain. In this condition the peristaltic motion is often reversed at intervals so that the intestinal contents are not moved along quietly and continuously as in health. 2d: paresis and paralysis, which affect the large intestine only. 3d: nervous flatulence, similar to nervous eructation. The sensory neuroses: about all that comes under this head is enteralgia, a painful irritation of of the intestinal nerves, occuring without apparent anatomical cause, and classed as a true neuralgia. The secretory neuroses include those cases in which there is a marked excess of intestinal secretion producing what is known as nervous diarrhea,or on the

other hand, a greatly diminished secretion, leading to obstinate constipation.

While gastro-intestinal neuroses are found among people of all ages, and both sexes, yet the most numerous sufferers are found among females between the ages of twenty and fifty. It is during that period of life when the cares, worries, and responsibilities are greatest, that these disorders most frequently occur. They are not peculiar to the refined, æsthetic, society-going class, those of opposite tastes and environments being equally subject to such derangements.

The victim of a well pronounced nervous disorder is a sick person; he can no more remedy his condition by the exercise of will power than he could rid his system of malaria by such means.

Some of these disorders like peristaltic unrest, flatulence, etc., by their continual annoyance, have a disturbing effect on the whole organism, as a sore corn, unrelieved, will eventually develop a case of nerves. This constant nervous disturbance of the digestive apparatus has a very depressing affect on the mind of the patient. He is disposed to greatly magnify his symptoms, imagines that he is much worse than he really is, and many such patients live in constant dread of a fatal ending, the result of a disease that has no existence. The gastro-intestinal contents not being cared for in a normal manner is doubtless the cause of more or less auto-intoxication, which still further aggravates the trouble.

When we endeavor to trace these disorders back to their origin, and locate a place where the nerve forces have gone wrong, we are working in the dark, as very little light has been thrown upon the disturbed processes that are responsible for them.

Before considering some of the possible causes it is necessary to first study the nerve supply of the organs under consideration. The nerves supplying the stomach are the right and left pneumo-gastric, and branches of the sympathetic, derived from the solar plexus. The intestines are supplied by the sympathetic, and it is claimed by Pal and others that the entire intestinal tract receives motor fibres from the pneumo-gastric. According to Bechteren and Mislawski, the acceleratory stimulus of the intestines passes through the pneumo-gastric, the inhibitory, through the spinal cord. In the various nervous disorders of the stomach and intestines, the trouble arises at some point in the pneumo-gastric or sympathetic system; or it may be that both systems are involved in the disorder.

In neurasthenia there appears to be a weak condition of the

nerve cells in general, and they are unable to supply enough nerve force, or dynamic energy, to keep the system in a normal working condition.

In the various neuroses the symptoms do not indicate exhaustion of nerve cells, with a consequent diminution of nerve force so much as they do nerve force gone wrong, or not properly distributed or inhibited.

I am of the opinion that when the stomach and intestines perform their functions in a thoroughly normal manner, the pneumo-gastric and sympathetic nerves must work together in perfect unison, like a musical instrument in perfect tune. If one of these nerves fails to do its part then there is discord and deranged function.

The subjects of these nervous disorders are persons who are so predisposed that they are usually the unfortunate possessors of an unstable nervous system, transmitted to them by hereditary; still, to develop a true neuroses, a factor must be brought to bear that previous to such development did not affect the individual. We can only speculate as to what this factor might be. Possibly it is the fatigue toxin of Weichart in the blood, which even in small quantities has a bad affect on some of the nerve centers; or it may be that there is an absence of something in the blood essential to the normal activity of these centers.

E. Schneider, in the New York Medical Journal of November 6th, 1907, states: "That certain facts have recently developed which suggest that supra-renal insufficiency may produce the phenomena common to neurasthenia, also digestive troubles, including anorexia, vomiting, diarrhea, and peritoneal symptoms."

A protracted, troublesome neurosis of the digestive organs may be due to a reflex nerve disturbance, originating in some remote part of the body, such as eye-strain, loose kidney, disease of the generative organs etc.

In just how far a local organic trouble in the pelvis or some other part of the body can be held responsible for a neurotic condition, cannot be satisfactorily determined without first removing or remedying, the defect.

A statement recently made by Robert T. Morris touching on this subject, and a reply by Dr. Frank P. Norbury, of the Maplewood Sanatarium. are both pertinent to questions that might be proposed at this point.

Dr. Morris says, in speaking of the treatment of these nervous patients at santariums: "Are there many in which the physicians make more than a shallow pretense of finding the real cause of a

neurasthenia? Do they look for eye strain, loose kidney, or involuting appendices, and the various well known leaks below the water line? Not at all! They depend upon the psychic influences of the environment for getting up the patients steam, or filling his sails."

In reply to Dr. Morris, Dr. Norbury says: "Are there many surgeons who proceed to study the real clinical psychology of their patients with a hope to find somewhere in the field of consciousness the mental perversion, the obsession, which in itself is the disease, and not the localized phenomena, of which pain, anorexia, etc., are the prominent symptoms." Speaking of surgical interference as a means of relief in such cases, he adds: "Not only is it profitless, but adds to the burdens of such an unfortunate one, whose diverse mental states are already wafted by the currents and counter-currents of self-consciousness. And not infrequently the surgical interference is the one necessary straw with which to break, perhaps forever, the patient's back."

The foregoing helps to prove the statement before made that a local disease may be associated in the same individual with a gastro-intestinal neuroses, without being responsible for it.

The diagnosis of the gastro- intestinal neuroses is arrived at largely by the process of exclusion. Some of them simulate organic disease so closely that they test the physician's skill to the utmost in making a correct diagnosis. Still, the behavior of most of them is such, in some essential particular, that he is enabled to exclude the organic disease which may be imitated. Gastric catarrh, and other organic diseases of the stomach, are recognized by symptoms which are aggravated by the ingestion of food, especially certain kinds of food, while in nervous derangements of the stomach these factors seldom have a bad effect, often, on the other hand, giving relief to some of the distressing symptoms.

In spite of the differential factors by which we are usually enabled to distinguish nervous affections of the alimentary tract from those of an organic nature, by the usual routine methods, carefully carried out, there are some cases in which the symptoms are so confusing that to get at a satisfactory understanding of the case it will be necessary to give a test meal, withdraw some of the contents of the stomach, and subject them to a chemical, and possibly a microscopical, analysis.

Some of the points that count for a good deal in making a diagnosis are: the personality of the individual; his build, age, habits, and the manner in which he talks about and describes his

symptoms. As to build, he is likely to be found well nourished, in spite of the long period of suffering which he claims to have passed through, this being obviously impossible had his condition been as bad as he imagined, or had it been due to organic disease.

These gastro-intestinal neuroses are essentially of a chronic nature, and while there are times of apparent improvement, these are offset by periods of relapse. The prognosis, therefore, must depend upon a number of elements that enter into the problem. If the disorder continues on from year to year, anatomic changes are likely to take place sooner or later with the development of a true gastric catarrh. If the patient is so situated in life that he can, and will, pursue the most desirable plans for his betterment that his physician can advise, then his recovery can be almost assured; but if he is so situated that he must remain at home, follow his usual vocation, surrounded by the same environment, and depend too much on drugs, the outlook as to a final cure is not very hopeful. However, the prognosis must be modified when the condition is found to be due to eye-strain, or some organic disease that can be remedied by surgical measures or otherwise.

While, in the various neuroses, certain methods of treatment are indicated to meet certain indications, there are a few general methods applicable to nearly all cases. The first and most important step in the treatment is to determine as to whether or not the trouble is purely functional. Refractive errors should be looked after, and corrected, if found; and while such correction may not cure the trouble, yet it will aid in effecting a cure by removing a disturbing factor. If an abdominal or pelvic trouble is found, or any "leak below the water line," it may require surgical interference, but, in my opinion, no more interference than would be justified if the neurosis did not exist. The habits of the patient should be carefully investigated, and everything that might be detrimental to his health corrected, if possible. Inquire as to the kind of food he eats, and whether he masticates it properly? Does he take as many hours for rest and sleep as he should? His sexual habits should be enquired into, as they may be the source of the disturbance. Having been able to exclude any organic trouble, to correct eye-strain, if found, and to secure the patient's assistance in the regulation of any deleterious habits, the next important step to consider is change of environment. This means that the patient should get back to conditions calculated to stimulate the various physiological functions; back to the woods, the fields, the mountains, and perhaps to the sea-shore—back far enough,

and long enough, to give the system a good opportunity to recuperate. While a change of life will not cure, it acts as an alterative tonic, giving the inherent forces of the patient the most favorable opportunity for regaining their normal condition. Everything that is calculated to build up the strength of the patient, and add to his vitality, leads him in the direction of greater nerve stability and effects the harmonious working of the perverted nerve centers. As to diet, it has been my experience that no hard and fast rules can be followed in these cases; so experimentation is required and is justifiable; every case of gastro-intestinal neuroses is a law unto itself as to the most appropriate diet. The patient should be nourished as much as possible, and it will often be found that food of which he was fearful can be eaten without any increased discomfort. It is often imagination that makes the patient afraid to try certain kinds of food, and if he is persuaded into a trial of such food, it may be that it is only through the imagination that he feels the worse for it. This fear can often be overcome by tact and encouragement on the part of the physician, because it is often purely imaginary. Medicines are often used to advantage to meet certain indications. Hyperacidity requires alkalies, such as bicarbonateof sodium, etc. Hyperperistalsis, and peristaltic uneasiness of either stomach or intestines, require the bromides, valerian, and other nerve sedatives, which usually serve a good purpose. Atony requires strychnia; anorexia, bitter tonics; gastralgia, during periods of rest, valerinates, iron, and arsenic—during the attack, hypodermics of morphine and atropine. There are few cases of nervous derangement, affecting either the stomach or intestines, but what will be benefited by the persistent use of tonics.

In speaking of the treatment of nervous dyspepsia, Anders says: "It is the nervous system that demands especial attention, and the internal treatment of the stomach is merely placeboic."

Persons who have been afflicted with a neurosis of the stomach or intestines for a considerable time, are apt to become more or less hysterical, morose, and despondent. Their imaginations magnify and add to their symptoms. They find it difficult to think of anything but themselves; they would rather talk about their bad feelings than anything else. Now, in my opinion, suggestion, as a remedial measure, will not cure the underlying nerve defect, but it often helps in a great degree to overcome the bad effects of the imagination, and helps to return the mind to a proper estimation of the real symptoms, which may not be so intolerable after all.

Boaz, speaking of the treatment of some of these functional nerve disorders, says: "We often learn from the failures of the patients what we should not employ, and, however paradoxical it may sound, that physician has the highest trump in his hand in the treatment of the neurasthenic in general, and of the nervous dyspeptic in particular, who treats them as the last."

GUNSHOT WOUND OF ABDOMEN.

By DR. W. S. GRISELL, Ransom, Kansas.

Read Before the Kansas Medical Society, at Iola, May 6, 1908.

In considering the question of care and prognosis in a given case of gunshot wound it is necessary to take into account, not only the location and apparent extent of the injury and general condition of the patient, but also the kind of weapon which inflicted the wound, the character of the missile, the range at which it was fired, and whether or not it passed through the patient's clothing before entering the body. This paper does not purport to touch the subject as it presents itself to the military surgeon, but we confine our observations wholly to the question as it presents itself to the general practitioner—the accidental injury which any of us may encounter at any time.

It is obvious that a shot fired at long range will not produce the same destruction of tissue and sloughing that it will produce if the weapon is in close proximity to the body.

Again, a missile which first passes through the clothing is likely to carry foreign matter and infection in with it while one which enters an exposed part of the body is not so likely to carry in either. As the abdomen is not apt to be exposed at times when accidents are likely to occur, (that is among civilized people and white folks generally), we have this danger from foreign matter and infection in most gunshot wounds of the abdomen, especially from a large bullet or charge of shot. The likelihood of serious lesion of some of the abdominal viscera however presents by far the greatest danger in this class of injuries and this danger is greater in wounds on a level with or below the umbilicus than in those higher up owing to the gravitation of the viscera to the lower part of the abdominal cavity in the erect posture, in which posture most such injuries are received. The vomiting of blood after a gunshot wound of the abdomen, our text books tell us,

is an indication of puncture of the stomach. However this is not conclusive evidence that the wound is mortal. I recall a case I saw with Dr. J. E. Attwood of Utica, Kansas, a few years ago: a man about thirty-five years of age who shot himself in the epigastrium with a 22-calibre rifle.

The ball ranged almost directly backward and a hard substance, evidently the ball, could be distinctly felt near the median line on the back. The normal position of the stomach lay in range with this hard substance in the patients back and the wound at which the bullet entered the body.

The patient was in such pain that he required an opiate, and he vomited a coffee-ground material which we decided was blood a few hours after the accident. The patient was sent to the hospital and I afterwards learned that he recovered without laparotomy, but I never learned whether or not the bullet was found in his back.

The following case occured in country practice: J. P. Male, Age 16. White. Large and well developed. Family history and habits good.

On April 30th. 1907 at one o'clock P. M. he accidentally discharged a 12-gauge shot gun loaded with No. 4 shot at a range of from six to twenty inches from the body, the load passing through the middle finger of the right hand one-half inch from the metacarpo-phalangeal articulation severing the finger almost completely, lacerating the palmer aspect of the thumb and fracturing the first phalanx.

The back of the hand was burned and blackened by the explosion. The load entered the abdomen two inches below and one inch to the right of the umbilicus ranging upward, backward and a little to the right.

Dr. F. D. Fagan of Brownell, Kansas, and myself were summoned and arrived about one and one-half hours after the accident. The patient had vomited a suspicious looking coffee-ground material. His general condition was fair and he was in good spirits.

In lieu of anything better we sterilized towels, sheets, instruments and dressings by boiling them in an ordinary wash boiler, used the kitchen table for an operating table and made an exploratory incision from the external wound upward.

We found not to exceed a dozen shot in the clothing, abdominal wall and peritoneum and there were also several pieces of clothing lodged in the abdominal wall. There were three openings in the peritoneum, one above another, at about the level of the umbilicus, through which the bulk of the load had evidently entered the

abdominal cavity, and passed beneath the pylorus and to the left of the duodenum.

There were several shreds of clothing in the abdominal cavity and the omentum was considerably torn, necessitating the removal of a considerable portion of it. The posterior margin of the liver could be felt, rough and was bleeding some. There were a few small ecchymoses on the small bowel but no punctures. We found none of the shot which had entered the abdominal cavity. The abdominal cavity was irrigated with normal salt solution and closed. A small gauze drainage was introduced into the external wound which was then closed with silk.

The finger was removed, the hand dressed and patient put to bed and given a hypodermic of morphine ¼ gr. and atropine one one hundred and fiftieth gr. A liquid diet was ordered, Also strychnine one-fourtieth gr. four times a day. There was some nausea the second day but no serious symptoms. The third day the nausea was less marked. The wound was dressed and the bowels moved with glycerine enema. On the afternoon of the third day the discharge became offensive and temperature rose slightly. Pulse went to 125 and became unsteady. A tablet of nitro-glycerine compound (De Costa) was given every three or four hours and the symptoms began gradually to improve. The bowels became loose after the third day and remained so until the eighth day when there was some gaseous distension of the abdomen, but no tenderness perceptible. On the eleventh day the nitro-glycerine was stopped and strychnine given again. About the fifth or sixth day the patient complained of tenderness in the muscles of the left leg. This became more marked in a day or two with swelling and redness extending to the middle of the thigh. The leg was bathed with laudnum and dressed with cataplasma kaolini and the swelling and pain soon disappeared.

There was considerable sloughing around and above the external abdominal wound, but the patient was able to sit up in six weeks, and convalescence was uneventful though tedious.

This case proves to my mind that vomiting of coffee-ground material after gunshot wound of the abdomen is not conclusive evidence of puncture of the alimentary canal. It also convinces me that the patient's family and personal history and habits are all-important questions to consider in giving a prognosis in this class of injuries.

DR. L. H. MUNN, of Topeka—There is probably no subject that comes up to the general practitioner or the surgeon of more importance than these cases of belly injury. Whether you have a well defined perforating wound or whether you have the evidence of contusion as the result of a fall, what should be your duty? I have opened the belly of men vomiting blood, expecting to find a perforation of the stomach and found none. I don't believe I made any mistake in doing it. How will you know when to open the belly. I don't know of anything that has tried me more than that proposition. There are only a few high points that can govern you in your coming to a conclusion what you should do. I take it from the doctor's report he didn't open the peritoneal cavity. He has not given us any high point on this man. A man cannot suffer from any injury, he cannot suffer from any pathological condition but he will give you somewhere some high point. Now this man, there are only two or three things and they are conclusive and definite. A man has received an injury to his belly by a kick or a fall or a load of shot, and the first propositon "Is the man sick?" If he is sick he will show it. By checking up his pulse and other symptoms you will decide the man is sick. You have not shown us this man was sick for the purpose of argument. There is only one other thing that governs me; suppose he has got a perforating wound, we cannot inject hydrogen, we cannot wait for him to have general peritonitis; if that man has received any injury of his abdominal cavity there is just one thing I have found always present, and that is muscular fixation. If the man is sick he has got muscular fixation; open his belly and you have done your duty by the man. If he has not got those high points let him go, whatever the injury be.

DR. JONES—I would like to ask the essayist what his idea was in giving strychnine the next day after receiving the injury. I am asking for information because it has been my plan always to regard anything of that sort as a menace to my patient. In many of those cases of gunshot wound of the abdomen, I think it might be well to take into consideration the social status of the patient. The ordinary rounder who has lived under most un-hygienic conditions all his life will tolerate a great deal more infection than the ordinary man who rarely gets such an injury. So as a general thing the man whose life it is most essential to the community to save is one of the hardest lives we have to save from a gun-shot injury. The man who has lived in squalor all his life will tolerate injuries to the abdominal viscera, including the kidneys, very much better than a man who is in the real pink of physical condition.

I agree entirely with Dr. Munn as to the necessity for going into these abdomens whenever the injury is sufficient to warrant the belief that there has been severe injury of a viscera. We should not wait for evidences of peritonitis; and another thing in connection with that is the fact that these injuries to the viscera are comparatively free from danger up to certain number of hours after the operation because peristalsis is absolutely paralyzed, and injury to the large bowel rarely lets anything escape except a laceration. A gun-shot wound rarely sets up a very great peritonitis for several days. An injury to the small bowels, the contents of which are always fluid, will set up a more immediate resistance on the part of the peritoneum, but still you have a few hours of safety in which you can enter the abdomen.

DR. LIGGETT, of Oswego—I believe Dr. Munn spoke about the high points in bowel injury. It seems to me there need be but one point in these gun-shot wounds, that is the fact of perforation makes it imperative that the bowel be opened at once; if you wait until you determine that something has happened inside, you have waited until you had better let your patient die a natural death, because the majority of them will die even if you do have an operation. It is in those cases of injury to the abdomen that do not penetrate that puzzles the ordinary physician and sometimes the surgeon. What symptoms can the surgeon give to the general practitioner that teaches him when he shall call the surgeon? Many times a man receives an injury to his abdomen and is not much hurt, and

again the very mildest of blows will produce death. I have in mind a case I saw where a horse in kicking out sideways jerked a clip off of the single tree and it swung around and hit a man in the belly, and he died in 10 days. How could the doctor in attendance tell that man's bowel ought to be opened within a few hours after the injury. After peritonitis sets up it is too late to do any good. What can he go by? The three points I have learned to depend on are, first: Pain, lasting longer than an hour or two, longer than the injury would warrant if it was in another location; second, shock with the signs, the facial appearance, quick pulse, etc; and third, and most important is the one, muscular rigidity. If you have pain, the least evidence of shock and muscular rigidity you certainly should open that belly at once. If you find you are mistaken you have not done the man much harm, if you do a good job.

DR. GRISEL, (Closing the discussion)—I would say, in the first place, that Dr. Munn misunderstood me. I said I did open the abdominal cavity and found the conditions described inside. In regard to the patient's being sick and having muscular rigidity, this patient had both. He had vomited I think two or three times immediately following the accident before I arrived, and there was considerable muscular rigidity and no marked failure of the pulse, it was reasonably good, considering the injury; but, as I say, the incision was made somewhat as an exploratory incision for the reason that the doctor just remarked if we waited—this patient was in the country five or six miles from any physician, I was the only one at that town, and the other physician at another town—it would be quite at undertaking for one physician with no skilled help at all, and under the circumstances which we had, which the city physician does not appreciate—we took the view that it would do the man no harm if it was done properly and it would certainly be almost criminal to leave a patient with a probability of visceral injury without giving him all the reasonable means of determining what the injury was. We also found, while there was no injury to the intestinal canal that required closure, it was very seriously lacerated and a considerable portion of it removed, and in the future care of the patient, the sloughing which occured in the subcutaneous tissue convinced me thoroughly that had not this portion of the peritoneum been removed it would certainly have sloughed too and in that case I could see no other than a fatal issue.

I also recall an experience I had a few years before of a man 40 years old, fell on a barge used for hauling stone, what we call a trifling injury of the abdomen a little below the navel and in a day or two he was up and out walking around in the yard at four o'clock in the afternoon; at 7:30 I was summoned and drove out two miles and found the patient dead, so this experience made me very solicitous as to the conditions inside.

The object of giving strychnine in this case was to sustain the circulation and prevent shock. There being no perforation we didn't consider that a reasonable amount would be in any way injurious.

I would also thank the doctor for his especial emphasis of the danger of expectant treatment. I don't believe it is the thing. If it is followed for a day or two until general peritonitis has set in he had better let the patient die a natural death and save his own reputation.

TREATMENT OF FRACTURES OF THE LEG.

By DR. G. P. MARNER, Marion, Kansas.

Read Before the Kansas Medical Society at Iola, Kansas, May 7, 1908.

Probably it should be deemed persumptuous in a County Doctor to attempt to write a paper of any value to the members of this society on so important a subject as "Treatment of Fracture

of the Leg." I trust you will regard the paper rather as an introduction to a subsequent discussion in which we may all hear the experience of individual members. I admit at the start that the paper is rather rambling, but you surely will overlook this, when I also tell you at the start that it is short.

For the treatment of fractures of the leg Scudder classifies: 1st. Fractures with little or no swelling or displacement. 2nd. Fractures with considerable swelling. 3rd. Fractures with a displacement of fragments difficult to hold corrected, and 4th. Open fractures. The indications to be met by treatment are correction of deformity, immobilization of the parts and restoration of the limb to its normal condition. To meet these indications successfully, it is necessary to have a clear knowledge of all the pathological conditions in each case. If one is able to find all the lesions which are present in a given case, a Potts fracture is not near so nerve racking. This fracture is usually spoken of as an injury from which perfect recovery is not be expected but my notion is that with a reasonably good knowledge of all the lesions and well applied suitable splints, a good result may be expected.

The lesions in this break, as we all know are rupture of the internal lateral ligament, fracture of the tip of the internal malleolus, a separation of the lower tibio fibular articulation, a fracture of the fibula two or three inches above the external malleolns, and a fracture of the outer edge of the lower end of the tibia, and if the force continues, the fracture may become an open one by pushing the internal malleolus through the skin.

These lesions permit a backward displacement and eversion of the foot by allowing the tendo Achilles to draw the foot backward, while the lack of support on each side allows the muscle (peroneal) to hold the foot in position of eversion and outward displacement.

Of equal importance to a knowledge of the pathology in a case of fracture of any part of the leg, is the question of splints. Ill fitting, unsuitable, and poorly applied splints, are the causes of more annoyance and bad results than all other defects combined. Splints should be reasonably firm, easy of application, and of such shape as will place the leg in as near normal position as possible and give the patient as much freedom as is consistent with safety.

In my own practice I have had very good results with a posterior wooden splint, which I have devised something after the plan of Esmarch double incline plane,but it is much more simple, costs less, and has the additional advantage of being so arranged that traction and counter traction can be had, and the patient can be

taken out of bed and be allowed to sit on a chair or lounge, and can be transported if necessary.

This splint as can be seen from the photograph is universal, can be used for a youth and the tallest adult. The wide upper end prevents turning over, and the opening at the lower end gives place for the heel to rest in, and it gives just enough flexion at the knee to give the patient the most ease.

Considerable attention should be paid to the padding of splints, according to the normal curvature of the leg, and all pressure must be kept from the heel. Scudder lays great stress on this point. His favorite splint is Cabots posterior wire splint. This splint answers very well, but has the disadvantage of having to be made for each patient, and is not the easiest thing made, and has no provision for traction and counter traction,

In fractures with little or no displacement and swelling, the treatment is simple, unless there are oblique fractures of both bones; in such an event there is liable to be shortening, which can best be prevented by traction. Traction also assists in keeping the fragments in place and is a great help in lessening pain. Side splints can also be used either with the splint I have described or Cabots wire splint, but the leg should not be so enclosed with splints and other dressing that inspection anteriorly and laterally can not be had at any time without disturbing the principal splint.

In fractures where there is considerable immediate swelling, all tight dressing must be avoided. The limb should be thoroughly cleansed with soap and water, afterwards washed with a bichloride solution, then dried and powdered, and the limb laid in a posterior splint, till the swelling partly subsides, then more attention should be given to reduction and permanent dressing.

Fractures with displacement of fragments difficult to hold reduced are usually oblique of both bones, the nearer the break is to the angle, the more difficult to hold reduced. They can be treated best by traction and side splints in addition to the posterior splint.

Open fractures are nearly always infected, at least should be treated as such. They should be thoroughly cleaned and disinfected according to the best known methods, except in joints. I would hesitate to wash with a bichloride solution as a synovitis might be caused which would do more harm than the original infecting material. In some instances it may be necessary to enlarge the wound and suture the fragment, but great caution is necessary in this procedure, the danger of infection is very great. When in doubt in such a case I believe it is the best practice to

give the patient the benefit of the doubt, establish free drainage, put the leg in a firm splint, and arrange to dress without soiling and disturbing the splint and padding, which can be easily done with the posterior splints described.

Potts fracture can, I think, be treated best by placing the leg in a normal position, viz: knee slightly flexed, and foot at right angle with leg placed in a posterior splint, and if the fracture is compound, dressing and padding so placed that the wound can be cleansed and redressed without disturbing the splint sufficient to move any of the fragments.

When sufficient union has taken place in any of the different fractures of the leg so that it can be safely handled, a plaster of Paris splint can be put on with advantage, and the patient allowed to go about on crutches. But for a first and permanent dressing, I believe it is far inferior, more troublesome and dangerous,and annoying to both patient and physician, than the solid posterior splint.

In conclusion I will quote again from Scudder. "The first night after putting up the fracture the patient will probably be uncomfortable. The new and restrained position, the after effect of the anesthetic, if one has been used, the splints of undue pressure yet to be adjusted, the itching of the skin, the inability to move about, the necessity of lying in one position, actual pain at seat of fracture, all combined to make life miserable. It will be a wise precaution on the part of the attendant if a little morphine is administered, subcutaneously first night, as the patient, nurse and physician will rest better."

DR. J. G. SHELDON, of Kansas City—This interesting and practical paper brings up a great many points. The splint is a good one, but there are a great many ways of dressing fractures. In some of these fractures where it is not advisable to put on a cumbersome dressing, a very good splint may be made by rolling plaster of Paris on a table. Here is one made for a girl's wrist which is very light but can be made as strong as one wishes, made by rolling a plaster of Paris bandage on the table and the plaster may be applied and molded to fit accurately. The great advantage of it is,it can be placed next to the skin without any particular trouble and hold most any sort of fracture in the desired position. It does not interfere with the circulation.

In the treatment of compound fracture, it seems to me it is well to divide them into two classes, those due to direct violence, and indirect violence. If the force has been applied some other place than the site of the fracture I think it is a great mistake to open that wound and clean out all the lower part for the reason that as the bone has been pushed from within outward the chances of infection is less if it is simply cleaned on the outside than if it is opened up widely. This rule will not hold good in a compound fracture due to direct violence. Then the foreign and dirty material probably has been thrown deeply into the part and cleansing is necessary. In regard to Pott's fracture, I believe most of these fractures ought to be dressed in inversion. I believe this manner is better as long as it does not spread the tibia and fibula from each other.

DR. MARNER, (Closing the discussion)—I have nothing further to add except one word in favor of the splint that is the ease it gives the patient, the slight flexion of the knee seems to add considerably to the ease of the patient. If you lay the patient straight he soon gets nervous; if you doubt this, just lie in bed with your own leg straight for an hour. You will not stand it that long; and the moment you put the patient on this splint he is at ease.

Now in regard to what the gentleman says to treating at right angles. Pott's fracture can be dressed with the inversion by simply padding the splint enough to bring the heel out at the base and putting a triangular plug against the boot. I had a case of Pott's fracture and I never saw better results than I got in that. In a few days after the patient got over the first restlessness it seemed the leg relaxed and we got a perfect result.

ACUTE GLAUCOMA.

By DR. J. G. DORSEY.

Read Before the Southwest Medical Association, Wichita, Kansas.

Priestley Smith says "Acute primary glaucoma is frequently mistaken by unskilled persons for an ordinary inflammation of the eye, and erysipelas or a neuralgia attack. This mistake is disastrous, for it leads to irreparable loss of sight.

This is excuse enough for writing upon this much discussed subject. The best way I know of to stop these mistakes is to bring before the profession the facts of the case so often that they cannot forget them.

Until 1709 when Brisseau showed that glaucoma was not a disease of the lens, and attributed it to opacity of the vitreous, glaucoma and cataract were often confounded and by many considered identical diseases.

1830 Mackenzie noted the hardness of the globe in this disease and practiced puncture of the vitreous for its relief. This observation was little noticed at the time and it was not until 1854 that it was really utilized, by Von Graefe, who rediscovered it and in his efforts to relieve the condition gave us iridectomy as its cure.

Von Graefe held that the disease was caused by a serous choroiditis which produced increase in the volume of the vitreous, rise in intraocular pressure and compression of the retina, and most authors add to this what to some would seem to be the results of such an inflammation; that is the blocking of the filtration angle of the aqueous from various causes and the changes in the aqueous that hinder its easy filtration through the canal of Schlemm. Stelwag held that the cause lay in a hardening of the sclerotic coat together with an atheromatous condition of the walls of the blood vessels. He also in a measure foresaw the theory of Zimmer-

man for he says "In many cases general disturbances in the circulation—for example, temporary increase of the cardiac pressure or slight obstructions in the region of the superior vena cava—may be the proximate cause, since they propagate themselves to the internal vessels, but can not be compensated for rapidly enough on account of the abnormal relations and hence remain permanent."

Notice the resemblance—Darier says "According to Zimmerman, glaucoma is due to a disturbance of the equilibrium which should normally always exist between blood pressure and intraocular tension." "Briefly, in one way or another, the blood pressure being lower than the ocular tension, the blood wave conveyed by the retinal artery has no longer the force necessary to over-come the resistance opposed to it, and this is especially the case because of the angle formed by the artery on entering the retina. It is then that one sees an arterial pulse in glaucoma on examining the eye with an ophthalmoscope."

"Retinal ischemia is thus induced, the nutrition of the capillaries suffers, lymphocytes transude, and the exudation of serum brings about a kind of oedematous infiltration, which helps in its turn to raise the intraocular pressure. As regards the ciliary processes, the filtration is the more marked as the long ciliary arteries traverse the sclerotic without making angles; the blood supply would take place more easily than for the retinal arteries. On the other hand, the ciliary veins with their fine walls are compressed by the excess of intraocular tension. From all this there comes about a ciliary hyperse creation, and then a swelling of the entire ciliary body, which compresses the irido-corneal angle etc."

Priestley Smith says "Primary glaucoma appears usually to depend on some vascular disturbance which congests the uveal tract, or upon a faulty relation of the lens to the parts around it, or upon both "and adds "An obstruction in the region of the hyaloid and the circumlental space, which checks the escape of surplus fluid from the vitreous and leads to an advance of the lens appears to be present in many cases."

All authorites agree with the statement of Priestley Smith that "The common antecedents of glaucomatus attacks are, exposure to cold and damp, fatigue, hunger, loss of sleep, depressing emotions, constipation, hepatic derangement, heart weakness, bronchitis etc." In short, various conditions which disturb the circulation and congest the venous system "and that they are benefited by the things that relieve these condition such as warmth, rest and purgation."

Darier says "Glaucoma is due to a sudden increase of the intraocular tension, provoked probably by a reflex vaso-dilator action which upsets the balance of the nutritive intraocular exchanges."

Ball gives as direct causes, "grief, anxiety, worry and the loss of sleep" and says "It should be defined as a disease of the sympathetic nervous system producing increased intraocular pressure."

He therefore embraces the nervous theory of Abadie, who holds that the disease is due to excitation of the vaso-dilator nerves through the sympathetic.

Knies and Weber hold that the disease is the result of glueing together of the irido-corneal angle and the blocking of the canal of Schlemm.

Pathologically in the acute variety the uveal tract shows congestion of the veins with hemorrhages.

The tissues are swollen by exudates containing fibrin, leucocyte red blood corpuscles etc.

Birnbacher & Czermack describe changes in the vortex veins.

The perivascular lymph-spaces and the surrounding sclerotic are infiltrated with round cells, and round and oval cells pervade the vessel walls.

The iris gives evidence of acute congestion and there is usually a tendency to closure of the filtration angle.

E. Von Hippel says that in acute glaucoma there is marked obliquity of the outer limbs of the rods and cones and that they are directed away from the fovea.

The optic nerve becomes cupped or depressed partly from the effects of pressure and partly from degeneration of the ganglion cells in the retina from which they spring.

The changes in the sclerotic are those to be expected from high pressure from within the eye: namely stretching and ectasia.

The periphery of the iris becomes adherent to the cornea blocking the filtration angle.

SYMPTOMS.

Prodromal symptoms are obscuration of vision and rainbow colored ring around a light. The anterior chamber may be shallower than normal and the pupil is sluggish with a tendency to dilatation.

These attacks last a few hours then seem to disappear to be followed at intervals by others of the same character. Between the attacks the eye seems normal except for an apparent presbyopia that becomes manifest.

The changes in the fundus at this time depend somewhat upon

the length of time the process has been going on and varies from slight congestion of the retinal veins with, perhaps, a pulsating vein or artery, to marked cupping of the disc.

The attack proper is ushered in with pain radiating from the eye along the first and second branches of the trigeminus, sometimes accompanied by vomiting. Vision is seriously impaired and the field of vision is narrowed, especially on the nasal side.

The appearance is that of severe inflammation of the eye. The lids are swollen, the conjunctiva congested and may be chemosed. The cornea has a smoky look and is insensitive to the touch. The anterior chamber is shallow, the pupil dilated and the iris discolored. The eye is manifestly hard to the touch. After a shorter or longer time the symptoms subside. A period of comparative or actual comfort supervenes to be followed sooner or later by another attack of pain etc. During these intervals the fundus may often be seen with the ophthalmoscope and the condition of the fundus noted.

There is not always a cupped disc after the first attack but after several such attacks the nerve head gives way to the intraocular pressure and the depression is manifest.

The disease usually affects both eyes, but one is attacked in advance of the other. It is seen more often in women than men and is a disease of later life. Usually appearing after the fortieth year and often in people of a rheumatic or gouty tendency.

DIAGNOSIS.

The disease may be confounded with erysipelas, neuralgia, biliousness, iritis, keratitis or conjunctivitis.

From the three first named diseases one can easily distinguish it if he takes into consideration the fact that the eye is the seat of the disease.

From iritis it is distinguished by the dilated pupil,the shallow anterior chamber and the absence of posterior synechia.

From keratitis by the absence of constitutional causes,the position and nature of the opacity and the dilated pupil.

From conjunctivitis it is distinguished by the opacity of the cornea, the dilated pupil, the shallow anterior chamber and the implication of the deeper blood vessels.

And from all of these diseases it is distinguished by the increased tension and insensitive cornea.

TREATMENT.

A large majority of the profession today, consider iridectomy the best treatment for acute congestive glaucoma, and with this I fully agree, but the fact that a number of experienced and capable

operators and observers advocate other methods is evidence of the fact that some-thing better is needed for the relief of this condition and leads us to a consideration of some of the other means adopted for its releif.

Holt of Christania, produces a subconjunctival prolapse of the iris, in an effort to simulate a cystoid scar. He avoids infection by placing the conjunctival incision ten (10) millimeters from the limbus. His results represent about the same percentage of cures as Grosz, of Budapest, gives for iridectomy in the same class of cases.

Arnold Knapp, of New York, performs a posterior sclerotomy in those cases of acute glaucoma characterized by very shallow anterior chamber and much tension. This is followed by the ordinary iridectomy.

Anterior sclerotomy is seldom performed in acute cases being limited to those cases where iridectomy can not be done such as threatened hemorrhage etc.

Some patients present themselves for treatment who are unwilling to undergo any operation, or upon whom for other reasons it is unwise to operate at the moment seen and for these cases we are called upon to do our best to relieve the pain and restore, for the time, the eye to its best condition.

Bearing in mind the fact that these patients are frequently rheumatic, it is usually wise to put them upon the salicylates in full doses, for a time; first opening the bowels thoroughly with a saline or a calomel purge.

A 1% solution of eserine, preferably in olive oil, or a similar strength of pilocarpine or arecoline in aqueous solution is dropped into the eyes to contract the pupil, and a little dionin added to quiet pain.

If the response is not satisfactory massage may enable the excretory apparatus to perform its work better and thus absorb the remedies.

Sometimes a blister to the temple or the abstraction of blood by the artificial leech assists in relieving the congestion of the eye long enough for the medicines to assert their specific action.

In those cases where an iridectomy has been done resulting in improvement, but with some complaint of uneasiness, and vision does not promptly rise as it should I have found a continuance of the anti-rheumatic treatment desirable as it was in the case of Mrs. B. age 57 of rheumatic habit seen first May 10, 1905.

Her pain had begun in left eye Dec. 24-1904 but she had smoky vision with rainbow around a light for 2 or 3 years pre-

ceding this. Since the 24th of Dec. has suffered more or less pain and now has a dilated left pupil with T. + 1. Eye injected and all the symptoms of acute glaucoma. V. R. E. equals twenty-thirtieths. V L. E. equals pl. over a small area toward temporal side but could not distinguish form with this eye. An iridectomy was done on each eye beginning with the left and the right operated upon after two weeks.

She was put upon the salicylates and eserine with the result that on March 26, 1906 her vision was twenty-twentieths for the right eye and twenty-fortieths for the left. There was marked cupping of the disc and narrowing of the field but the eyes are useful and I consider the result very satisfactory.

Formic Acid as a Tonic After Diphtheria.—In doses of from five to twenty minims of a twenty-five per cent. solution, formic acid is recommended for its tonic and stimulating effects in convalescence from diphtheria, by C. B. Kerr and D. H. Croom. It is given in the doses stated every four hours.—

Berliner klinische Wochenschrift, June 22, 1908

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Application for the Prevention of Bedsores.—The following applied as a varnish twice daily to the parts menaced, will act as a preventive of bedsores:

Guttapercha	ʒi;
Chloroform	ʒi;
Balsam of Peru	gtt. XV

M.

N. Y. Medical Journal.

⚜ ⚜ ⚜

Application for Pruritus Ani et Vulvæ.—A paste of the following composition maybe applied to the parts affected:

R	Salicylic acid	gr. xxx;
	Phenol	gr. xv;
	Tartaric acid	gr. xlv;
	Glycerite of starch	ʒiii;

M.

To be followed by the free use of a dusting powder:

R	Powdered talc	ʒvii;
	Zinc oxide	ʒi.

M.

N. Y. Medi. Journal.

THE JOURNAL
OF THE
Kansas Medical Society.

JAMES W. MAY, - - - - EDITOR.
J. E. SAWTELL, } ASSOCIATE EDITORS { CHAS. S. HUFFMAN.

Subscription Rates: $2.00 per year, 20c single copy. Advertising rates furnished promptly on application.

The Journal was established in June, 1901, by a publication committee at Topeka. In May, 1903, Dr. G. H. Hoxie was elected editor and served four years. In January, 1904, it incorporated the Wichita Medical Journal, owned by Drs. W. H. Graves and G. K. Purvis, and the Western Medical Journal, owned by Dr. A. J. Roberts, of Ft, Scott. In March, 1908, it incorporated the Wyandotte County Medical Journal owned by Dr. James W. May. It is now printed in Kansas City, Kansas, and appears the first of every month. Correspondence should be addressed to the editor. Editorial office, 501-2 Husted Bldg., Kansas City, Kans.

OFFICERS OF THE SOCIETY.—C C. Goddard, Leavenworth, President; E. E. Liggett, Oswego, 1st Vice-President; G. W. Goss, Sedan, 2nd Vice-President; B. M. Barnett, Roedale, 3rd V-President; Charles S. Huffman, Columbus, Secretary, L. H. Munn, Topeka, Treasurer.

COUNCILLORS.—1st Dist., Chas. W. Reynolds, Holton; 2nd Dist., H. B. Caffey, Pittsburg; 3rd Dist., F. M. Daily, Beloit; 4th Dist., O. J. Furst, Peabody; 5th Dist., O. P. Davis, Topeka; 6th Dist., J. A. Dillon, Larned; 7th Dist., Preston Sterritt, Kansas City; 8th Dist., A. L. Cludas, Minneapolis.

EDITORIAL

The columns of this Journal are open at all times for the expression of opinion on subjects of interest to the medical profession and it is expressly desired that clinical or news notes be sent to the editor for publication where proper credit will be given.

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Did you ever scan the news notes of the Journal A. M. A. and find anything there from Kansas? If you did it was a great exception and does not occur once in many moons. This condition of things is our own fault as the Journal is willing at all times to print notes from this State as well as any other. Will not some one volunteer to furnish the A. M. A. Journal with items showing that Kansas, the greatest state in the Union, is also in the front rank in medicine and surgery—"Stand up for Kansas."

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At the next meeting of our society lets have a committee on preventative medicine formed, whose duty it will be to help eradicate gonorrhoeal, ophthalmia, trachoma, small pox, scarlet fever, tetanus from insane 4th of July celebrations and many other diseases which can absolutely be prevented. This committee should work first by a campaign of education directed to physicians

and also the laity; second by a campaign of legislation, and it seems that it would accomplish much and be of lasting benefit.

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The benefits from good medical legislation which has been enacted during the past ten years can hardly be estimated. When one stops to think of the benefits derived from the pure food and drug laws which have but recently taken effect we wonder why the profession at least was not aroused from its lethargy long enough to realize what might be accomplished. This is only a small part of what has been accomplished, for one has but to glance over the records of the legislatures to know what has been done in helping to put to rout charlatans (by having a rigid examination to pass), the promotion of vital statistics, and numerous other measures of protection. It behooves us as professional men to help elect legislators who are in sympathy with the progress along these lines. A start has only been made and we must be eternally up and doing to accomplish results.

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Your editor during his recent sojourn in Chicago at the A. M. A, meeting, by a mistake wandered into the meeting of the association of medical editors of America. It is composed mostly of editors of the independent medical journals. There were many brilliant medical writers present and many valuable papers were read and discussed. The whole business part of the meeting seemed to be an attack on the A. M. A. Journal for its stand in regard to accepting no advertisements of preparations not passed by the Council of Pharmacy. When one stops to think of the number of medical journals which would have to quit business if they refused the "ads" of semi-patent medicines it is no wonder that a mighty protest was registered. If a medical Journal cannot exist without accepting questionable advertising then lets sound the funeral dirge and let their expiring gasps give music to our ears.

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At the Chicago Session of the American Medical Association the following resolution was adopted by the House of Delegates and the General Secretary was instructed to bring it to the attention of all state associations:

Resolved, That this Association heartily approves the action of the Board of Trustees in restricting advertisements of medical preparations to those approved by the Council on Pharmacy and Chemistry: and further

Resolved, That this House of Delegates requests all those state associations which now do or hereafter may publish or con-

trol medical journals to restrict their advertisements to such approved preparations, and that the General Secretary be requested to bring this resolution to the attention of all state associations.

The above communication has been sent to our secretary to submit to the State Society. In all probability the society will decide but one way, and that is to sustain the American Medical Association. The time is right at hand for us to question every person who is introducing some drug or compound as to whether it has been approved by the Council of Pharmacy of the A. M. A. This is our only safe guard for we have no other means of proving the manufactors statements. The Council has been very lenient with the manufacturers and have turned down none of the preparations without abundant reason. We have been fooled long enough by these houses whose claims are not substantiated by fact and they must now "deliver the goods."

CRIMINAL ABORTION.—The time was, and not long since, when altogether too many of the reputable members of the profession looked with more or less indifference upon one of the most heinous crimes known to the civilized world, that of criminal abortion. Since a more thorough medical organization has been established throughout the country and a better knowledge of the principals for which organization stands has been disseminated, there seems to be an awakening of sentiment in opposition to this enormous offense against law and morality. It might appear to some that this criminal practice is on the increase on account of the more frequent notices of criminal prosecutions appearing in the daily papers but relatively speaking this is not true. As population increases and becomes more dense the greater is the demand for criminal acts of this kind and it is too often met by the mercenary and disreputable element of the profession who are either opposed to, or have no just place among the organized profession. That prosecutions of this class of practice are on the increase there is no doubt but that to medical organization is due the credit is evidenced by the fact that the most potent influence in this direction is always exerted by the members of our medical societies.

County societies should heartily join hands with the legal authorities in helping to stamp out this crime, for we owe it not only to society at large but to the reputation of the profession which is our duty to uphold.

J. E. S.

HOW IS THIS.—It is reported that a coroner in London impanelled a jury to determine whether the operation was justifiable which resulted in the death of a patient.

Sir Victor Hosley was summoned as a witness in the case There is need of such a jury at times. There are, no doubt, human lives sacrified almost daily from unnecessary, uncalled for, and bungling operations. Too many operations are done, operations that are too radical. There should be more conservatism.

This charge will not hold against the better class of good physicians and surgeons. By good is meant by those who are conscientious and skilled in the profession. It does apply to fakirs both outside and some who are recognized in profession, and especially the latter class bring a stigma on the whole profession. It creates a doubt in the mind of the laity when they know of operations being needlessly done, and sometimes ending fatally, whether any operation should be done, and often delay has been fatal because of such an experience of meddlesomeness on the part of the so called surgeon. For example, what a frightful appearance an injured eye may present and yet be saved. On the other hand, an eye should be removed at times when to all outward appearance there is but little showing of injury or disease. In the first case, the unscrupulous fakir has clear sailing. From the appearance of the eye to the patient and friends, consent is readily given to enucleate the eye which could be saved of, at least, an effort made to save it. For there is no danger in ten days or two weeks delay in such cases. But there is more money in an enucleation, to the scoundrel. There is a greater name and honor in operating. There is less labor, and altogether the unscrupulous man has greater financial interest in doing the least and getting the most for it. The mutilation of the patient does not affect him.

In the other case, when the physician or surgeon knows from the failing sight of the injured eye,and the slight scleral or circumcorneal zone of redness and the dread of light in the uninjured eye, the damage through sympathetic inflammation and loss of sight of the good eye, that the offending eye should be removed, the patient and friends hesitate until it is too late and the irreparable mischief is done; because some fakir has destroyed their confidence in an unnecessary, uncalled for operation on some friend or acquaintance

What is the remedy? Publicity. The public is more or less aroused, as indicated by the London coroner's action. But the exposure should be made by the profession. Half of the

jury at least should be composed of reputable physicians, and after a careful deliberation justice could be meted out. Such a course would tend to check this indiscriminate operating. More lives would be saved and fewer people go through life maimed and mutilated.

J. E. M.

CLINICAL NOTES

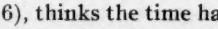
YELLOW OXIDE OF MERCURY is a good remedy for furunculosis of the external auditory canal. Especially is this true after the furuncle has been incised and to prevent their recurrence.

An old, narrow Graefe cataract knife is an ideal instrument for opening the drum membrane in suppurative otitis. Ethyl chlorid narcosis is best for this brief operation.

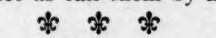
American Jour. Surgery.

Instead of suturing the skin after amputation of an extremity, it is sometimes better to bring the flaps together with broad strips of adhesive plaster, especially if the operation performed is for an arteriosclerotic condition.

American Jour. Surgery.



MEANINGLESS DIAGNOSES.—H. L. Wiel, San Francisco (Journal A. M. A., June 6), thinks the time has come for the medical profession to stop the use of certain ill-used but time-worn diagnoses which mean nothing definite and are used merely to hide ignorance and satisfy the patient. Perhaps the most freely used of these is bilousness, which is no diagnosis at all, and he also mentions as falling into the same category typhoid pneumonia and typhoid malaria, ptomain poisoning, a frequently misused appellation, and gastric fever. There are many others, and he asks, "Should not all conscientious physicians discard the use of these terms, and if there are none better to be found in the present terminology, why use terminology at all?" Rather than call things by false or meaningless names, let us call them by no names at all.



OPHTHALMIC NOTES.

By DR. J. E. MINNEY.

An almost universal collyrium in all forms of conjunctival troubles and in ulceration of the cornea an eye wash that will

meet more indications than any one other agent is the following:

R Acidi carbolici 95% ..... gtts. v-x;
Aquae distillata ..... ℥i.

Sig: Apply from five to ten drops to the everted lids, hold for a few moments, then let the lids return,—do not wash off the excess.

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In case of ulceration of the cornea, the pupil should be kept dilated with atropia as per prescription:

Rx Atropiae sulphatis ..... grs. ii-iv;.
Aque Dist ..... ℥i.

Sig: Put two or three drops on the cornea once or twice a day.

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2. Another eye wash but not so soothing in irritable conditions of the external eye is:

R Glyco-Thymolini (Kress) ..... ℥i.

Sig: Apply from five to ten drops to the mucous surface of the everted lids, hold for a few moments and then return the lid to their normal position. If much smarting, put a small quantity of cocaine ointment in the eye—one grain of cocaine to one ounce of vaseline.

These applications may be applied as indicated, twice a day, daily or every second day.

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The lead style is being used again, instead of the silver tube in keeping the nasal duct open. The duct is dilated a time or two and the soft lead style No. viii is introduced and let remain for an indefinite time, unless there are intoward symptoms. It is soft and moulds itself readily to the canal and has no opening like the silver tube to serve as a breeding place for bugs.

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NEWS NOTES

Dr. A. H. Cordier and family of Kansas City, Mo., has left for Canada and Alaska on a hunting trip.

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Dr. W. K. Trimble of the University of Kansas has returned from the east where he took post graduate work at Harvard University.

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Five members of the graduating class of the University of Kansas have accepted positions in the City General Hospital of Kansas City, Missouri.

DR. J. F. BINNIE of the University of Kansas will spend the summer travelling in Europe and visiting the various clinics. He will return in October.

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Dr. M. C. Porter, formerly of Clay Center, Kansas, is now in partnership with Dr. John H. Outland for the practice of surgery exclusively. Located at Topeka.

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Correction.—The article in the July issue on Iritis by mistake was credited to Dr. A. C. Graves, Pittsburg, Kansas. It should have been Dr. W. H. Graves of the same place.

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The Medical Association of the Southwest, which embraces the state of Kansas, Arkansas, Oklahoma, Texas, and Missouri, will hold its annual meeting in Kansas City, Mo., on October 20th and 21st. Dr. John Punton is chairman of the committee of arrangements.

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Rice County Medical Society, program for August 20 at Lyons, Kansas.

The Physician's Wife.....Mrs. E. C. Fisher
Antrum Trouble.....Dr. Gregory
Legal Medicine.....Hon. O. A. Hopkins

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There was a good attendance at the July meeting of the Shawnee County Medical Society.

Dr. W. C. McDonough reported a case of appendicitis in a woman who refused operation. After weeks of suffering it terminated favorably by rupture into the bowel and discharge of pus by rectum. Dr. Harriet B. Adams reported three cases of tricophytosis capitis.

Dr. W. W. Yates presented a good paper on nephritis which was freely discussed.

Dr. T. P. Scott was elected a member.

J. B. TOWER, Secretary.

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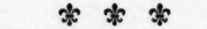
THE INTERNATIONAL CONGRESS on TUBERCULOSIS will hold its meeting at Washington, D. C., Sept. 21st. to Oct. 12th. 1908. This will be an event of great importance, and since such a Congress cannot occur again in the United States for 25 or 30 years to come, the opportunity which it gives to us of the passing generation is literally unique. President Roosevelt has

accepted the presidency of the Congress and Dr. Jno. S. Fulton, of Washington, D. C. is Secretary-General.



KANSAS MEDICAL COLLEGE, TOPEKA, NOTES,

The Jonathan Thomas Memorial Gymnasium at Washburn will cost $45,000. It is in course of construction and will be finished by the holidays.

The rebuilding and remodeling of Rice Hall at Washburn at a cost of $30,000 will add to the appearance of the building and make it much more up to-date than the old building, which was destroyed by fire last winter.

It is the plan of the administration of Washburn College to set apart an endowment of $100,000 for the Medical Department and to expend $50,000 in improvement and equipment in the near future.

A special course of instruction will be given at the Kansas Medical College and the various hospitals in the city, beginning August 31 and continuing one week. The Alumni of the College will attend and a general invitation is extended to physicians. The following program has been prepared.

PROGRAM.

MONDAY AUGUST 31.

9–12 Surgical Clinic at Christs Hospital by Drs. McClintock, Bowen and Kiene.
2–4 Practical Clinical Haemotology at Pathological Laboratory by Dr. Hammel.
4–5 The Eye in General Diseases—Lecture by Dr. J. E. Minney
8 Address by Pres't. Sanders, followed by a Reception.

TUESDAY SEPT. 1.

9–12 Surgical Clinic at Santa Fe Hospital by Drs. Kaster and Freeman.
2–4 Practical Clinical Haemotology at Pathological Laboratory by Dr. Hammel.
4–5 Lecture on Pediatrics by Dr. Peers.
8 Lecture by Dr. Dillon, Larned, Kansas.

WEDNESDAY SEPT. 2.

9–12 Surgical Clinic at Stormont Hospital by Drs. Munn and McGuire
2–4 Practical Clinical Bacteriology at Bacteriological Laboratory by Dr. Greenfield.

4–5 Lecture by Dr. O. P. Davis.
8. Lecture by Dr. Frankenburger, Kansas City.

THURSDAY, SEPT. 3.

9–12 Surgical Clinic at Bethesda Hospital by Drs. Outland and Porter.
2–4 Practical Clinical Bacteriology at Bacteriological Laboratory by Dr. Greenfield.
4–5 Dieto-therapy of Diabetes by Dr. Menninger.
8 Lecture by Dr. Walker of Wichita, Kansas.

FRIDAY SEPT. 4.

9–10 Adenoids—Lecture and Demonstration by Dr. Alkire.
10–11 Lecture on Diabetes by Dr. S. G. Stewart.
11–12 Atypical Pneumonia—Lecture by Dr. McGuire.
2–5 Lecture and Clinic at State Hospital by Dr. Biddle.
8 Demonstration and Lecture on XRay by Dr. Johnson.

SATURDAY SEPT. 5.

9–10 Amuesic States—Lecture by Dr. Lindsay.
10–11 Lecture by Dr. W. E. McVey on Treatment of Cardiac Disorders.
11–12 Pott'sDisease—Clinical Lecture by Dr. Storrs.
2–3 Lecture by Dr. Mitchell.
3–4 Internal Secretions by Dr. Warriner.
8 Lecture and Demonstration by Dr. Turk of Chicago.
Banquet.

BOOK REVIEW.

" A Mind That Found Itself."

An autobiography by Clifford Whittingham Beers. Cloth; Octavo. Pp. 363. New York, 1908. Longmans, Green & Co.

This is an unusual sort of book in that it is the very carefully and sanely worked out thesis of a man who has been insane and recovered. His recovery and the truth of his statements are vouched for by some of the best alienists of the country, and in particular by William James of Harvard.

Mr. Beers graduated from the high school at New Haven, Conn., in June, 1894. A brother of his died about that time of what was thought to be epilepsy and the fear of this disease seems from then on to have become a fixed dread in the young man's mind until it had taken entire possession of his life.

Nevertheless he entered the Sheffield Scientific School of Yale University and managed to go through the whole four years' course, although with some difficulty because of his apparent inability to master his nervousness. He graduated from Yale June 30, 1897, and immediately went into office work, first as a clerk in the office of the collector of taxes in the city of New Haven, and then a year later with a business firm in New York City. In March, 1900, he was attacked by la grippe and as a result nervous troubles ensued which compelled him to give up work and return home. He of course believed that he was becoming epileptic and wished rather to end his life than to undergo the horrors of that disease.

Consequently on the 23d of June, 1900, he endeavored to commit suicide by dropping out of the fourth story window from the room where he had been lying ill. He dropped however on to turf instead of the pavement and as a result only crushed both ankles in place of killing himself; and what is stranger still the delusion or the dread of epilepsy disappeared, with the shock and in its place came on a psychosis in the form of an attack of severe depression or melancholia.

He was removed to a general hospital and went through the usual sufferings not only those incident to broken ankles but also those of a melancholic who believed that all persons around him were in league against him, that everybody was trying to poison him or send him to jail, that he had committed an unpardonable crime and disgraced his family,—and all that sort of thing. He suffered from hallucinations, particularly those of hearing and sight. During this treatment he was kept in bed with his legs in casts. As soon as he could be moved, he was put into a private hospital for the insane. This asylum was one conducted for profit by private individuals and conducted badly. He was confined with a "muff" and treated as if he could not think and could not appreciate what was being done and he shows how these things instead of helping him to master himself and keep more quiet made him more violent and desirous of putting an end to himself and destroying things about him. During this time he could not talk and was practically cataleptic. He pictures vividly the treatment given him by the physicians who seemed to treat him more as a machine or an animal than as a human being. His final recovery to reason was probably insured at this juncture by securing as an attendant a man more humane than the ordinary brutal attendant, who although ignorant of psychology believed in non-restraint secured his confidence and tried to do his best for him. This attendant finally secured his release from this private sanitarium (God save the mark!). But after it had been found impossible to care for him adequately at home he was sent to another institution, private also, but endowed and not run for profit. Things went well here until he came under the care of an assistant physician with no conception apparently of the correct treatment of the insane. He was still trying to commit suicide and had made every preparation to do so when by a clever ruse he proved to himself that the man who came to see him and claimed to be his brother was really his brother. As soon as his mind was clear this point, he rebounded from the depressed condition to the elated and expansive one and proceeded to take a very active interest in life, and especially in the lives of his fellow-patients. This was on the 30th of August, 1902. His interest in his fellow-patients led him to interfere so frequently with the routine treatment established by physicians and the attendants that he at once got into quarrels with the latter, and they no longer treated him as convalescent but proceeded to choke him and otherwise reduce him to submission. And finally when simple beatings did not compel him to desist from criticising them, they put him in the "bull pen" and the strait-jacket. Here he was kept for nearly three months, without sufficient clothing, without adequate food, and without means of keeping himself clean—all simply because he believed that he and his fellow-patients should be treated as men and not as brutes or as machines.

For instance, on the 18th of October, 1902, he had three fights with his attendants, and finally choked into insensibility. From that time he was kept in close confinement without his clothing and without humane treatment until the last of December. Finally, he managed to get word to his brother of his treatment and was removed from this institution and placed in a state hospital for the insane where he was better treated although he soon came into collision with one of his attendants and was put into a violent ward. He describes the methods of treatment employed upon him and upon kindred patients. He describes in detail the outrages (which sometimes amounted to murder) that he saw committed and has equipped his narrative with facts and figures in such a way as to make it very convincing. While in the violent ward of the state hospital, where he was placed January 1903 he finally managed to communicate with his brother and the Governor of the state, and at last was moved back into one of the quiet wards March 3, 1903.

During these months of elation (since his recovery from the depression ending Aug. 30, 1902) the idea of securing reforms in the treatment of the insane had been his one absorbing passion and he had made exhaustive studies into the treatment of his fellow-patients, the character of the attendants and physicians and had been eager to be put into the violent wards just to see how they were conducted—making all sorts of daily memoranda in preparation for his work. As his expansive condition spent itself, he was able to keep this purpose somewhat in subjection and when he was finally dismissed from the state hospital in May 1903 and allowed to go back to business, he worked for one year before he found himself ready to give up his business to devote himself to the prosecution of his crusade. The first result of this propaganda was that he was put back into an asylum but he demonstrated so quickly that he was perfectly self-controlled, that he was allowed to go out after a month's confinement. He has devoted the greater part of his leisure time since then to the arrangement of the material which constitutes this book. During this period he submitted his manuscript to all sorts and conditions of critics—from Joseph H. Choate to neurologists, psychologists, alienists and physicians, having each one criticize and blue pencil it until the statements made should be sound and authentic. During all this time, he was making a good income from his business and proving himself an efficient member of society.

His book is one great plea for non-restraint and I can do no better than quote some of his sentences. For instance, the following from Page 298: "It is evident therefore, that insanity, if it is ever to be conquered, must be attacked along lines not commonly followed today. As to the method of attack to adopt there can be no argument, for the masters of medical education in every country in Europe have proved the practicability and value of the plan in question. What is needed in order to reach the root of the problem of insanity is the establishment of so-called Psychopathic Psychiatric Hospitals in connection with our medical schools—hospitals where in nervous and mental diseases may be treated in the most scientific manner, not only for the benefit of the patients but also for the benefit of the physicians and students. What a leap forward in humanitarian endeavor it would be if each university, so situated and organized as to warrant it, should have under its everlasting protection a modern psycopathic hospital! And what could be more appropriate than the restoration of lost reasons under the hospitable protection of the very institutions wherein reason itself is trained to do its right work? Further, psychopathic hospitals will enable scientists to study insanity; and such institutions by setting a high standard, will soon raise the standard of treatment throughout the country. The necessity for such modern hospitals may be appreciated when an accredited authority in this country in matter pertaining to medical education (Dr. William H. Welch of Johns Hopkins University) can say, as he did to the writer of this book: 'The most urgent need in medical education in America, today, is the need of psychiatric clinics (psychopathic hospitals) where medical students and physicians as well may benefit by instruction in psychiatry, and where scientific research into the cause and cure of insanity may be carried on unceasingly.' When the fact is considered that each university in Germany, France, Italy, Switzerland, Austria, Russia, Norway, Sweden, Denmark, Holland, Belgium, Brazil, Argentine Republic and Japan, at the present time, has a psychiatric clinic under its own control, and that no physician in most of these countries may practice medicine until he has passed a satisfactory examination in psychiatry the disgraceful state of affairs existing in this, the richest nation in the world, may be the more readily appreciated. In the light of such embarrassing facts, it is indeed high time that the United States of America should prove itself the vauntedly progressive nation it is supposed to be by taking hold of the neglected problem of insanity, and through its several state legislatures bringing into existence psychopathic hospitals of the type described in the interesting U. S. Consular Report on the Munich Clinic (Kraepelin's). Thus far, Michigan is the only state in the union to erect a modern psychopathic hospital. New York however has taken steps toward the erection of one, a well meant though totally indaequate appropriation having been voted for the purpose. As each community owes

it to itself to make provision for the prompt treatment of causes of incipient insanity, and thus spare the individual the ordeal of commitment as an incompetent, it is fortunate that relief is at hand for such cities as cannot maintain a modern psychopathic hospital. Here the so-called general hospitals may be put to full use. Separate buildings, or pavilions, may be erected and maintained at comparatively slight cost, as has already been proved by the success of the psychopathic hospital at Ann Arbor, Michigan. That is to say, for considerably less than $100,000.00 an efficient department of mental and nervous diseases may be organized and brought under the control of any well managed general hospital. Though there is but one general hospital in the country where this problem has been worked out, the results of what five years ago was an experiment have justified the rather startling venture made by the pioneer in this important work. Dr. J. Montgomery Mosher, Specialist in Nervous and Mental Diseases at the Albany Hospital, Albany, New York, is the man who has had the courage and good sense to go ahead and prove that a general hospital should and can receive and treat mental diseases as successfully as the diseases which are now treated without question in such institutions. * * * He says: 'From February 18, 1902, the day of the first admission to February 28, 1907, 1,030 patients have entered the building. Of these 596 have returned to their homes recovered and improved; 316 have remained stationary; and 86 have died. 245 have been transferred to institutions for the insane; of these 126 were sent to Paviilion F for detention during the legal proceedings, and 118 were committed after a brief period of observation. It thus appears that 905 patients have been under treatment without legal process, 118 of whom it became necessary to commit later to institutions for the insane. If this special provision for the treatment of the mentally deranged had not been made in the Albany Hospital, then these 908 patients would either have had to be improperly treated at home, or would have been committed after a probably harmful development of the disease.'

His proposal is then in short that our medical schools be equipped with psychopathic hospitals and the medical education include some real instruction in psychiatry. Every medical man will, I believe, heartily endorse this proposal.

His second proposition is that every large general hospital should include a pavilion for treating the acutely insane. This avoids the odium of committment to a state institution, and insures the attention and attenance of specialists for the various departments of general medicine and surgery. It would make possible the treatment of the insane in nearly every city and therefore nearer the friends of the patients.

Practically all alienists now agree that the state institutions for the care of the insane should be of two characters: (1) the custodial, and (2) the psychopathic or reception hospitals. Now however both functions are being placed upon single institutions except in Michigan. The objection to the Michigan system comes strangely enough from the heads of the state hospitals, who say that the reception hospital at Ann Harbor takes away from them all the interesting work, and makes the other institutions purely custodial. This objection to the division of the work should of course be listened to, but should be evaluated only as it affects the welfare of the patients. The question is not, how do our present institutions look upon the proposal? but rather, would it benefit the people of the state to separate the custodial from the therapeutic institutions?

The question will soon come up in Kansas and the legislature will be called on to decide where to locate the reception hospitals now demanded by the increase in the insane population. One suggestion is to establish such psychopathic wards at Topeka and Osawatomie, and thus make these institutions combine the functions of the two types of institutions, and another is to give the University of Kansas at Rosedale a psychopathic hospital for training the physicians of the state in psychiatry.

In general then Mr. Beers' book touches upon a very vital problem and treats it in a most fascinating manner. It is worth the perusal of every good citizen, whether physician or layman.

DR. G. H. HOXIE.